AGENDA

NPA SAFETY AND HEALTH TELECON

08/08/2001

1 PM MDT

(202) 554-0199

Passcode 2010#

202-720-8560 (Trouble Number)

202-720-6143 (Alternate Trouble Number)

Roll Call & Welcome	Bonnie
Review Last Month=s Minutes	JoAnne
Teleconference Access Problems	Bonnie
Update SHEMB/NPA Safety Conference-FY2002	Bonnie
IH Baseline Survey Update	Alvin
Frequency of written Plans Review	Bonnie
When to Call 911 Discussion Continues	All
Employee Exposure to Chemical Spill	All
On-site Nursing Mothers Program	Alvin
How do you evaluate the effectiveness of your training program?	All
Questions, Concerns, Open Discussion	All
Close	

Note:

Element K web address is http://www.elementk.com/

Employee Exposure to Chemical Spill

An employee was pipetting fluid from a test tube that contained 4.25 ml of reagent (see below) when the pipette broke and a drop of the solution splashed onto her cheek and wrist. She was working under chemical fume hood with her lab supervisor. They had the sash above the recommended working level when doing this procedure together. They were also sitting down on chairs while "both" were working in the chemical fume hood at the same time. Both employees were wearing lab coats, safety goggles and disposable gloves. The gloves were not long enough to protect the splash victim's wrist.

Assume that total amount spilled on the skin is 200 microliters = 0.2 ml = 2 drops. The employee is worried and wants to consult with a physician.

Is this dangerous? Was this splash and air contaminant exposure above the action level or the permissible exposure limit? Is it ok to send the employee to a physician? Why or why not?

Is there an environmental concern? Why or why not?

Should a CA1 be completed? Is this recordable on the OSHA 200 log? What should be done with the CA1? Should payment for medical services be done thru OWCP or out of location funds?

What should be done to prevent a more serious accident from happening?

References:

Reagent 1		
sodium hydroxide (certified ACS)	45 grams	100%
Methanol (HPLC grade)	150 ml	100%
Deionized distilled water	150 ml	
Total volume:	300 ml	

Reagent 2		
6.00N Hydrochloric Acid	325 ml	50%
Methanol (HPLC grade)	275 ml	100%
Total Volume:	600 ml	

Reagent 3		
Hexane (HPLC grade)	200 ml	80%
Methyl-tert Butyl Ether (MTBE) (HPLC grade)	200 ml	90%
Total Volume:	400 ml	

The test tube the employee was working with contained 4.25 ml of the mixture listed below:

Reagent 1 added to tube amount of 1 ml
Reagent 2 added to tube amount of 2 ml
Reagent 3 added to tube amount of 1.25 ml

Total volume: 4.25 ml

Chemical	TLV	Ceiling Limit	Health Effects
n-Hexane	50 ppm	-	Neuropathy, CNS, irritation, 5mg/g creatinine
Methanol	200 ppm	250 ppm	Neuropathy, vision, CNS, BEI=15 mg/L urine
Sodium Hydroxide	-	2 mg/m3	Irritation
Hydrochloric acid	-	5 ppm	Irritation, corrosion
Methy-tert-butyl ether (MTBE)	(40 ppm)	-	Irritation, CNS, A3=Confirmed animal carcinogen with unknown

			relevance for humans; BEI under study
Distilled water	-	-	-

( ) denotes adopted values are those for which changes are proposed in the Notice of Intended Changes...

This is from the American Conference of Government Industrial Hygienists - 2001 TLVs & BEIs.